Geophysical Research Abstracts
Vol. 14, EGU2012-13500, 2012
EGU General Assembly 2012

Environmental and indoor study of Radon concentration in San Joaquin area, Querétaro, México

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Highly contaminated zone with a maximum over 57,000 Bq/m3 was discovered in low-populated area "Agua de Venados" during the 2009-2011 soil Radon survey in San Joaquin, Querétaro state, Mexico. Indoor Radon monitoring accomplished in 2 different époques in a nearby 4 dwellings have shown increased Radon contamination in 1 of the 4 building (up to 300 Bq/m3) during a raining season and a highly elevated indoor level (over 400 Bq/m3) already in 3 buildings during a dry season. Averaged diurnal indoor Radon variations are in a correlation with atmosphere pressure and air humidity and are independent on air temperature. The daily interval 5-10 a.m. was estimated as a maximum risky period in terms of Radon contamination hazard for inhabitants in mentioned zone.